

UNITED STATES DISTRICT COURT  
DISTRICT OF MASSACHUSETTS

UNITED STATES OF AMERICA	)	Case No. 09-10243-MLW
	)	
v.	)	
	)	18 U.S.C. §371 (Conspiracy)
RYAN HARRIS, a/k/a DerEngel,	)	18 U.S.C. §§1343, 2 (Wire Fraud)
	)	18 U.S.C. §§982(a)(2)(B), 981(a)(1)(c),
Defendant	)	28 U.S.C. §2461(c) (Criminal Forfeiture)
	)	

**SUPERSEDING INDICTMENT**

The Grand Jury charges:

**INTRODUCTION**

At all times relevant to the charges in this Indictment:

1. RYAN HARRIS, a.k.a. "DerEngel," lived in California and Hong Kong. He was the founder, owner, and president of, and a software developer for, TCNISO, Inc., a company incorporated in California, with its principal place of business in the San Diego area. TCNISO's primary business was to develop, distribute, and sell "cable modem hacking" software and hardware products. These products were designed to modify cable modems so that users could obtain internet service from Internet Service Providers, without paying for this service and without disclosing their true identities. Additionally, HARRIS created and administered forums on the TCNISO website that offered ongoing customer support to assist users with their cable modem hacking.

2. I.L., an unindicted co-conspirator, lived in Kentucky and was a software developer for TCNISO.

3. C.P., an unindicted co-conspirator, lived in California and was vice president of TCNISO from approximately 2003 until approximately 2007.

4. N.H., an unindicted co-conspirator, lived in Worcester, Massachusetts, and acquired and repeatedly used TCNISO's cable modem hacking products and services in Massachusetts.

5. W.M, an unindicted co-conspirator, lived in Everett, Massachusetts, and acquired and repeatedly used TCNISO's cable modem hacking products and services in Massachusetts.

6. L.G., an unindicted co-conspirator, lived in Revere, Massachusetts, and acquired and repeatedly used TCNISO's cable modem hacking products and services in Massachusetts.

7. J.L., an unindicted co-conspirator, lived in Mattapan, Massachusetts, and acquired and repeatedly used TCNISO's cable modem hacking products and services in Massachusetts.

8. Certain Internet Service Providers ("ISPs") provide internet service through cable networks, which are the same systems that deliver cable television signals. ISPs charge subscribers a monthly fee for this internet access and typically charge an additional premium if subscribers want faster internet access.

9. In order to access the internet through a cable network, a subscriber installs a cable modem, which connects the subscriber's computer to the ISP's cable network. ISPs offer the modems to the subscriber and charge a rental fee. Each cable modem is assigned a theoretically unique MAC (or "media access control") address that identifies the specific modem to the ISP. This unique MAC address is designed to allow the ISP to associate the particular cable modem with a particular paying cable subscriber and to ensure that only paying subscribers are accessing the ISP's cable network.

10. When a computer user seeks to access the internet, the user's modem will report its MAC address to the ISP, and if the ISP recognizes the modem's MAC address as belonging to a paying subscriber, the ISP will allow the user to access the internet via the ISP's network. The ISP

will also deliver a unique “configuration file” to the modem that determines the speed with which the internet access will be delivered.

11. “Cable modem hacking” includes the alteration of the modem’s software for the purposes of obtaining internet service without an account and without paying for that service. In order to steal internet service, the computer user’s modem is modified so that it uses, without authorization, a MAC address that belongs to the cable modem of a legitimate, paying internet service subscriber. This is often referred to as MAC address “cloning” or “spoofing.”

12. “Cable modem hacking” also includes the modification of a modem to use, without authorization, a configuration file that the ISP would provide only to a legitimate, paying subscriber. By modifying a modem to use a configuration file associated with premium, higher-speed service, a user can increase (or “uncap”) the speed at which the internet service is provided without paying the required premiums.

13. Additionally, “cable modem hacking” – particularly MAC address cloning or spoofing – can be used to mask the user’s online identity.

COUNT ONE  
(Conspiracy)  
18 U.S.C. §371

14. The Grand Jury realleges and incorporates by reference the allegations in paragraphs 1-13 of this Indictment, and further charges that:

15. From approximately 2003 through approximately August 2009, in the District of Massachusetts and elsewhere,

RYAN HARRIS

and others known and unknown to the Grand Jury, did knowingly conspire to commit wire fraud, by devising a scheme to defraud and to obtain money and property by means of false or fraudulent pretenses, representations and promises, and transmitting and causing to be transmitted in interstate commerce, wire communications, including writings, signals, and sounds, for the purpose of executing the scheme to defraud.

MANNER AND MEANS OF THE CONSPIRACY

16. HARRIS and his co-conspirators developed cable modem hacking products and services – including “Sigma,” “Blackcat,” and “DreamOS” – that enabled computer users to obtain internet service without making the required payment. Among other techniques, HARRIS’s products and services enabled users to disguise their cable modem by mimicking, or “cloning,” the unique identifiers, including the MAC address, of the modem of a legitimate, paying internet subscriber. The user thereby received internet service without paying for it.

17. HARRIS’s products and services also enabled users to obtain faster, upgraded (or “uncapped”) internet service without paying the premiums charged by the ISP. These products and services enabled users to use, without authorization, configuration files that the ISP would otherwise

only provide to a legitimate subscriber paying for premium access. The user therefore received the type of faster internet service for which a legitimate user was paying a premium.

18. HARRIS's products and services also enabled users to disguise their true online identities, which in turn allowed them to remain anonymous when engaged in online activities such as downloading infringing or pirated movies onto their computers.

19. HARRIS and his co-conspirators developed additional software tools that users could use to steal (or "sniff") the MAC addresses and configuration files belonging to legitimate, paying subscribers and use these identifiers, in conjunction with HARRIS's other products, to obtain free or faster internet access, without authorization.

20. HARRIS and his co-conspirators developed additional product features that would help users evade detection by ISPs, for example, by disabling the ISP's ability to "probe" the cable modem to obtain information about it.

21. HARRIS and his co-conspirators distributed their cable modem hacking products and services on their website, [tcniso.net](http://tcniso.net), as well as at the TCNISO store in San Diego, California. HARRIS charged users for some of the products and made others (particularly older versions) available for free. HARRIS sold both the software and hardware as stand-alone products and also sold the software pre-loaded onto cable modems.

22. HARRIS and his co-conspirators also provided ongoing support to assist their users with cable modem hacking, primarily through their website, [tcniso.net](http://tcniso.net). The website offered video tutorials and other instruction manuals. It also contained forums, or bulletin boards, that allowed HARRIS, his co-conspirators, and users to exchange information about product updates and provide tutorials and advice about installing and using HARRIS's cable modem hacking products. HARRIS

and several co-conspirators moderated and personally participated in these online discussion forums.

23. Through these forums, users discussed, with HARRIS, his co-conspirators, and each other, acquiring and exchanging stolen MAC addresses and configuration files.

24. Additionally, the forums hosted discussions about techniques that certain ISPs employed to detect and block the use of HARRIS's cable modem hacking products on the ISPs' networks. In response to these discussions, HARRIS and his co-conspirators developed and distributed updates to their products and services that were designed to work-around the ISPs' detection and blocking techniques.

25. HARRIS also offered for sale a book entitled "Hacking the Cable Modem," which HARRIS wrote, under his alias, "DerEngel," and for which I.L. was the "technical reviewer."

26. HARRIS and his co-conspirators knew that users successfully used HARRIS's products and services to obtain internet service and faster internet access without paying.

27. This scheme injured numerous ISPs around the country, and from approximately 2003 through 2009, generated more than \$1 million in revenue for TCNISO.

#### OVERT ACTS

HARRIS and his co-conspirators committed the following overt acts within the District of Massachusetts and elsewhere:

##### Development and Distribution of TCNISO Products

28. Beginning in approximately 2003, HARRIS, I.L., and C.P. developed and distributed Sigma, a cable modem hacking software application.

29. Beginning in approximately 2004, HARRIS, I.L., and C.P. developed and distributed Blackcat, a combination of hardware and software that enabled users to modify newer, more secure

cable modems.

30. Beginning in approximately 2005, HARRIS, I.L., and C.P. developed and distributed Sigma X, a more sophisticated version of the Sigma software, which had the ability to block ISPs from “probing” a modem to determine whether it was hacked.

The TCNISO.net Forums

31. From in or about 2006 to in or about 2008, HARRIS and his co-conspirators hosted on the tcniso.net forums comments from users who stated that they were using or attempting to use TCNISO’s products to steal internet access from various ISPs.

32. From in or about 2006 to in or about 2008, HARRIS and his co-conspirators hosted on the tcniso.net forums comments from users who stated that they were using or attempting to use TCNISO’s products to obtain faster internet access from various ISPs without paying for the faster service.

33. From in or about 2006 to in or about 2008, HARRIS and his co-conspirators hosted on the tcniso.net forums comments from users who stated that they had stolen or “sniffed” for the MAC addresses of legitimate, paying internet subscribers and were looking to trade these stolen MAC addresses with other users.

34. From approximately 2006 to 2008, HARRIS and his co-conspirators hosted on the tcniso.net forums comments from users who stated that their ISPs were detecting and blocking them from the ISPs’ networks and who sought assistance about how to work around these detection and blocking techniques.

35. On or about March 27, 2007, HARRIS, identifying himself by his alias “DerEngel,” posted on the tcniso.net forum a comment asking for any “verified MAC addresses and/or config

files" for a major metropolitan area, promising that "rewards will follow."

N.H.'s Acquisition and Use of HARRIS's Products and Services

36. From approximately 2005 through 2008, HARRIS, I.L., and C.P. communicated repeatedly online with N.H about cable modem hacking.

37. In approximately 2005, N.H downloaded the Sigma software to his home computer, in Massachusetts. He then accessed TCNISO's website forums and used them, along with other means, to trade for stolen MAC addresses belonging to legitimate Charter Communications ("Charter") internet subscribers. N.H. used Sigma to change his modem's MAC address to a new Charter MAC address. N.H. was then able to connect to the internet via Charter without paying.

38. N.H. also used Sigma to change his modem's configuration file, and in doing so, "uncapped" his modem. This increased his internet access speeds approximately ten-fold; N.H. did not pay the premium for this faster service.

39. In approximately 2007, N.H. downloaded to his home computer a new version of the Sigma program – Sigma X. N.H. used Sigma X to modify a new cable modem and obtain free, uncapped, internet access from Charter.

40. N.H. and C.P. discussed hacking into another ISP, RoadRunner, in order to obtain free internet service.

41. On or about January 15, 2007, N.H. accessed the internet, using HARRIS's products and services and a cloned MAC address, and participated in an online chat in which he discussed hacking into Motorola's computer servers.

42. On or about December 5, 2007, N.H. accessed the internet, using HARRIS's products and services and a cloned MAC address, and participated in an online chat in which he discussed

hacking into Charter's computer servers.

J.L.'s Acquisition and Use of HARRIS's Products and Services

43. In or about June 2008, J.L., using a computer in Massachusetts, visited the TCNISO website, placed one or more orders for one or more modified cable modems and ancillary products, and made one or more online payments to HARRIS.

44. HARRIS then sent the modems and ancillary products to J.L., in Massachusetts.

45. J.L. used TCNISO's website and forums to obtain information that he used to change his modem's MAC address and configuration file.

46. From in or about June 2008 through in or about June 2009, J.L. was then able to connect to the internet via Comcast without paying.

47. J.L. also bought from TCNISO approximately 20 additional cable modems, which he provided to his friends and family members, many of whom were also located in the District of Massachusetts.

L.G.'s Acquisition and Use of HARRIS's Products and Services

48. In or about January 2009, L.G., using a computer in Massachusetts, visited the TCNISO website, placed an order for a modified cable modem and ancillary products, and made an online payment to HARRIS.

49. HARRIS then sent the modem and ancillary products to L.G., in Massachusetts.

50. L.G. used TCNISO's website and forums to obtain information that he used to change his modem's MAC address and configuration file.

51. From in or about January 2009 through in or about January 2010, L.G. was then able to connect to the internet via Comcast without paying.

W.M.'s Acquisition and Use of HARRIS's Products

52. In or about June 2009, W.M., using a computer in the District of Massachusetts, visited the TCNISO website, placed an order for a modified cable modem and ancillary products, and made an online payment to HARRIS.

53. HARRIS then sent the modem and ancillary products to W.M., in Massachusetts.

54. W.M. used TCNISO's website and forums to obtain configuration files and other information, which he used to change his modem's MAC address and configuration file.

55. From in or about June 2009 through in or about August 2009, W.M. was then able to connect to the internet via Comcast without paying.

FBI Undercover Buys

56. On or about November 24, 2008, HARRIS, through the tcniso.net website, sold two Motorola SB5100 BlackcatUSB cable modems, three Motorola SB4200 Sigma cable modems, and one "Hacking the Cable Modem" book to an undercover FBI agent in Boston, Massachusetts.

57. On or about November 24, 2008, an undercover FBI agent in Boston called TCNISO at the phone number provided on the tcniso.net website. HARRIS or a TCNISO employee answered the phone and helped process the purchase of the modems and the book.

58. On or about December 14, 2008, HARRIS sent the purchased modems and the book to the undercover FBI agent in Boston. These modems were capable of obtaining free and faster internet service from a cable network.

All in violation of 18 U.S.C. §371.

COUNTS TWO-ELEVEN

(Wire Fraud)

18 U.S.C. §§1343 and 2

59. The Grand Jury realleges and incorporates by reference the allegations in paragraphs 1-13 and 16-58 of this Indictment, and further charges that:

60. On or about the dates set forth below, in the District of Massachusetts and elsewhere,

RYAN HARRIS

having knowingly devised a scheme to defraud and to obtain money and property by means of material false and fraudulent pretenses, representations and promises, transmitted and caused to be transmitted, in interstate commerce, wire communications, including writings, signals, and sounds, for the purpose of executing the scheme to defraud, and aided and abetted others in doing so, as set forth below:

<b>Count</b>	<b>Approximate Date</b>	<b>Wire Transmission</b>
2	2005	N.H. accessed the internet from Massachusetts and downloaded HARRIS's Sigma cable modem hacking product
3	2007	N.H. accessed the internet from Massachusetts and downloaded HARRIS's Sigma X cable modem hacking product
4	January 15, 2007	N.H. accessed the internet from Massachusetts, using HARRIS's products and a cloned MAC address, and participated in an online chat, discussing his hacking activities
5	December 5, 2007	N.H. accessed the internet from Massachusetts, using HARRIS's products and a cloned MAC address, and participated in an online chat, discussing his hacking activities

6	June 2008	J.L. accessed HARRIS's TCNISO website from Massachusetts and bought a modified cable modem and ancillary products
7	July 2008	J.L. accessed the internet from Massachusetts, using HARRIS's products and a cloned MAC address, and obtained free internet access
8	January 2009	L.G. accessed HARRIS's TCNISO website from Massachusetts and bought a modified cable modem and ancillary products
9	February 2009	L.G. accessed the internet from Massachusetts, using HARRIS's products and a cloned MAC address, and obtained free internet access
10	June 2009	W.M. accessed HARRIS's TCNISO website from Massachusetts and bought a modified cable modem and ancillary products
11	July 2009	W.M. accessed the internet from Massachusetts, using HARRIS's products and a cloned MAC address, and obtained free internet access

All in violation of 18 U.S.C. §§1343 and 2.

**FORFEITURE ALLEGATIONS**  
18 U.S.C. §981(a)(1)(c), 28 U.S.C. §2461(c)

61. Upon conviction of any offense in violation of 18 U.S.C. §§371 or 1343 as asserted in Counts One through Eleven of this Indictment, the defendant,

RYAN HARRIS,

shall forfeit to the United States, pursuant to 18 U.S.C. §981(a)(1)(c) and 28 U.S.C. §2461(c), any property, real or personal, that constitutes or is derived from, proceeds traceable to the commission of such violation.

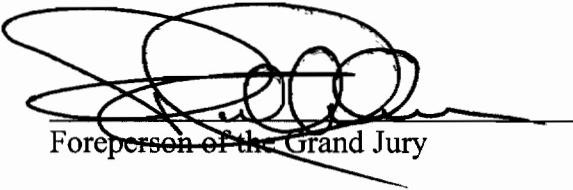
62. If any of the property described in the preceding paragraph as being forfeitable pursuant to 18 U.S.C. §981(a)(1)(c) and 28 U.S.C. §2461(c), as a result of any act or omission of the defendant –

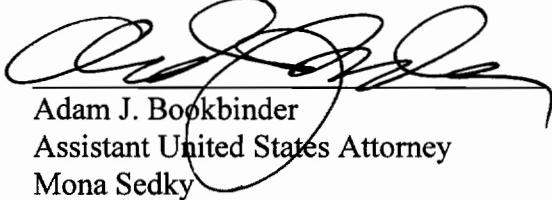
- a. cannot be located upon the exercise of due diligence;
- b. has been transferred to, sold to, or deposited with a third party;
- c. has been placed beyond the jurisdiction of this Court;
- d. has been substantially diminished in value; or
- e. has been commingled with other property which cannot be divided without difficulty;

it is the intention of the United States, pursuant to 28 U.S.C. §2461(c), incorporating 21 U.S.C. §853(p), to seek forfeiture of all other property of the defendant up to the value of the property described in subparagraphs a through e of this paragraph.

All pursuant to 18 U.S.C. §981 and 28 U.S.C. §2461(c).

A TRUE BILL

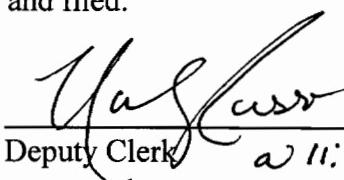
  
Foreperson of the Grand Jury

  
Adam J. Bookbinder  
Assistant United States Attorney  
Mona Sedky  
Trial Attorney, Department of Justice

DISTRICT OF MASSACHUSETTS

May 18, 2011

Returned into the District Court by the Grand Jurors and filed.

  
Deputy Clerk *a 11:58 P.M.*  
*5-18-11*